

REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 2-6 were previously cancelled without prejudice to or disclaimer of the contents thereof. Claims 1 and 7-32 are pending, of which claims 16-21 and 26-31 are withdrawn, and claims 1, 7, 9, and 10 are amended. Claim 1 is independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Allowable Subject Matter

The Examiner states that claims 13-15 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph and rewritten in independent form.

Applicants thank the Examiner for the indication of allowable subject matter in this application. However, claims 13-15 have not been rewritten in independent form at this time, since it is believed that independent claim 1 as previously presented, from which these claims depend, is allowable.

Request for Reconsideration / Examiner Interview

As noted above, the only claim amendments made by way of this Reply are non-narrowing amendments to each of claims 1, 7, 9, and 10 which have been made merely to address the Examiner's objection and rejection under 35 U.S.C. 112, second paragraph.

Further, the Applicants respectfully submit that independent claim 1 and the claims depending therefrom as previously presented are not taught or suggested by the Harada et al. reference cited in the latest Office Action.

Based on the deficiencies of Harada et al., it is respectfully requested that the Examiner reconsider and withdraw her rejection under 35 U.S.C. 102(b). (See arguments below.)

With the minor made herein to claims 1, 7, 9, and 10, the Applicants believe that the present application is now in condition for allowance.

If, during further examination of the present application, any further discussion with the Applicants' Representative would advance the prosecution of the present application, the Examiner is encouraged to contact Carl T. Thomsen, at 1-703-208-4030 (direct line) at her convenience.

Rejections Under 35 U.S.C. §102(b)

Claims 1, 7-12, and 32 stand rejected under 35 U.S.C. §102(b) as being anticipated by Harada et al. (U.S. 5,746,085).

This rejection is respectfully traversed.

Arguments Regarding Independent Claim 1 as Previously Presented

Independent claim 1 as previously presented recites a combination of elements directed to a die apparatus, including *inter alia*

“first and second die members and first and second punch members, ...

wherein said first and second die members are moveable towards each other along a first axis to a closed position thereby partially forging said toothed portion from a blank placed in said die apparatus and forming a substantially closed cavity defined by said forming surfaces,

said first and second punch members being disposed on opposite sides of said cavity, between said first and second die members, and said first and second punch members being adapted to move towards each other along a second axis substantially perpendicular to said first axis, into said cavity, once said die members are in said closed position, thereby completing said forging operation.”

Support for the features in **independent claim 1** as previously presented can be seen, for example, in the published application U.S. 2007/0079643 A1 at paragraphs [0040] to [0050] with reference to Figs. 4 to 10.

The Examiner has incorrectly identified item 6 of Harada et al. as corresponding to both the “first and second punch members” of **independent claim 1**. Item 6 of Harada et al. does not have the features of claim 1 associated with the “first and second punch members” for the following reasons. Firstly, item 6 of Harada is clearly functionally a single component. It is a ring shaped die. In engineering drawings a sectional view of a ring shaped object appears as two mirrored halves, which is why item 6 in Figs. 1 and 2 of Harada et al. may appear to someone inexperienced with engineering drawings as being two components. However, on reading Harada et al. as a whole and correctly interpreting the figures it is clear that item 6 is functionally a single component.

The Examiner has used the wording "...[multi-segment die 6, left segment and right segment]..." to support the assertion that item 6 corresponds to the "first and second punch members" of **independent claim 1**. The only use of the term "multi-segment" in Harada is at column 2, lines 63 to 66, which states "In practice, the gear die 6 has a multi-segment die construction in which a plurality of parts are combined and fitted into each other to form one die". Complex die components are often constructed in segments so that the die is easier to manufacture or to allow segments that wear to be replaced without replacing the whole die. However, a die constructed as such is still functionally a single component and there is no relative motion between the segments of the die. By using the wording "one die", Harada et al. make it clear that "multi-segment" in this context means that the segments are combined to form a single functional component. Furthermore, the wording "left segment and right segment" used by the Examiner is never used in the description of Harada et al.

There are further indications that item 6 of Harada et al. is a single functional component. In the sectional views Figs. 1 and 2, only one half of the sectional view of item 6 is labeled with a reference numeral, and item 6 always moves as a whole. Also, column 2, lines 61 to 62, states "The gear die 6 has internal teeth 17 formed in the inner diameter portion for the helical gear..." This would only be possible if the die 6 was functionally a single component.

Secondly, Harada et al. do not disclose a die apparatus having the following feature of **independent claim 1**: "said first and second punch members being adapted to move towards each other along a second axis substantially perpendicular to said first axis." The Examiner has not attempted to explain how Harada et al. discloses a die apparatus having this feature. Even if

the left and right hand sides of the die 6 of Harada et al. could be construed as corresponding to the “first and second punch members” of **independent claim 1** they are not “adapted to move towards each other”. Even if the left and right hand sides of die 6 were separate components, they would be constrained from moving towards each other by constraint sleeves 2 and 12, and they would be constrained from moving away from each other by tubular holders 14 and 15. In fact, no relative movement is possible between the left and right hand sides of die 6.

Furthermore, the left and right hand sides of die 6 do not move “along a second axis substantially perpendicular to said first axis”. The Examiner has identified items 1 and 10 of Harada et al. as corresponding to the “first and second die members” of **independent claim 1**. Items 1 and 10 of Harada et al. move towards each other along a vertical axis, as can be seen by comparing Figs. 1 and 2 of Harada et al. **Independent claim 1** requires that the “first and second die members are movable towards each other along a first axis”. Therefore the vertical axis that items 1 and 10 move towards each other along corresponds to the “first axis” of **independent claim 1**, as the Examiner has noted. The left and right hand sides of die 6 of Harada et al. move together up and down along the same vertical axis as items 1 and 10, as can be seen by comparing Figs. 1 and 2 of Harada et al. Therefore, if the left and right hand sides of die 6 are construed as corresponding to the “first and second punch members” of **independent claim 1** then the vertical axis that die 6 moves along must correspond to the “second axis” of **independent claim 1**. Therefore the corresponding “first axis” and “second axis” of Harada et al. are not perpendicular to each other, instead they are in fact the same axis. For Harada to anticipate this feature of **independent claim 1**, the left and right hand sides of die 6 would have

to move towards each other along a horizontal axis, as viewed in Figs. 1 and 2. Only a horizontal axis would be perpendicular to the vertical axis that items 1 and 10 move along.

The Examiner is not consistent in identifying the items of Harada et al. that correspond to the features of **independent claim 1**. For example, the Examiner states "... a portion of the forming surface of said first die member (1) being shaped substantially as an obverse of teeth of said rack...". However, item 1 of Harada et al. has a forming surface shaped as a conical tip, and it is die 6 that has a forming surface 17 shaped as the obverse of gear teeth.

As such, Harada et al. do not anticipate **independent claim 1**, as amended herein.

At least for the reasons explained above, the Applicants respectfully submit that the combination of elements as set forth in **independent claim 1** is not disclosed or made obvious by the prior art of record, including Harada et al.

Therefore, **independent claim 1** is in condition for allowance.

Dependent Claims

The Examiner will note that dependent claims 7, 9, and 10 have been amended to address the objection and rejection under 35 U.S.C. 112, second paragraph.

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, or due to the additional novel features set forth therein.

For example, the Examiner has incorrectly identified item 15 of Harada et al. as corresponding to the "wedge members" of **dependent claim 8**. Item 15 of Harada et al. is a "tubular holder" (column 2, line 57) that in conjunction with tubular holder 14 guides die 6 such

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that it can “float” in a vertical direction. Item 15 is a single tubular component rigidly connected to tubular holder 14. Item 15 does not move during the operation of the die (compare Figs. 1 and 2) and it is in no way “adapted to urge said punch members into said cavity”. The Examiner appears be incorrectly interpreting the sectional Figs. 1 and 2 as indicating that item 15 of Harada et al. comprises two separate members, when in fact item 15 is clearly a single component.

All claims as previously presented are in condition for allowance

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §102(b) are respectfully requested.

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CONCLUSION

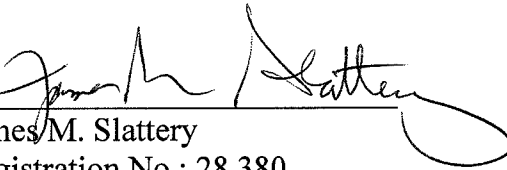
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030(direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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